SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: **VARSOL™ 1 FLUID**
Product Description: Petroleum Hydrocarbons

Intended Use: Solvent

COMPANY IDENTIFICATION

Supplier: **EXXONMOBIL CHEMICAL COMPANY**
SDS – LOC. 106
22777 Springwoods Village Parkway
Spring, TX 77389-1425 USA

24 Hour Health Emergency	(800) 726-2015
Transportation Emergency Phone	(800) 424-9300 or (703) 527-3887 CHEMTREC
Product Technical Information	(832) 624-8500
Supplier General Contact	(832) 624-8500

SECTION 2 HAZARDS IDENTIFICATION

This material is hazardous according to regulatory guidelines (see (M)SDS Section 15).

CLASSIFICATION:

Flammable liquid: Category 3.
Carcinogen: Category 2. Specific target organ toxicant (central nervous system): Category 3. Aspiration toxicant: Category 1. Product contains a Category 2 carcinogen at concentration between 0.1 and 1.0 wt% and is assigned a hazard classification on that basis. The associated label elements and product label information are optional and not included.

LABEL:
Pictogram:

Signal Word: Danger

Hazard Statements:

H226: Flammable liquid and vapor. H304: May be fatal if swallowed and enters airways. H336: May cause drowsiness or dizziness.

Precautionary Statements:
P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P210: Keep away from heat/sparks/open flames/hot surfaces. -- No smoking. P233: Keep container tightly closed. P240: Ground / bond container and receiving equipment. P241: Use explosion-proof electrical, ventilating, and lighting equipment. P242: Use only non-sparking tools. P243: Take precautionary measures against static discharge. P261: Avoid breathing mist / vapours. P271: Use only outdoors or in a well-ventilated area. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection.P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P308 + P313: IF exposed or concerned: Get medical advice/ attention. P312: Call a POISON CENTER or doctor/physician if you feel unwell. P331: Do NOT induce vomiting. P332 + P313: If skin irritation occurs: Get medical advice/ attention. P370 + P378: In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish. P391: Collect spillage.P403 + P235: Store in a well-ventilated place. Keep cool. P405: Store locked up.P501: Dispose of contents and container in accordance with local regulations.

Contains: STODDARD SOLVENT

Other hazard information:

HAZARD NOT OTHERWISE CLASSIFIED (HNOC): None as defined under 29 CFR 1910.1200.

PHYSICAL / CHEMICAL HAZARDS
Material can accumulate static charges which may cause an ignition. Material can release vapors that readily form flammable mixtures. Vapor accumulation could flash and/or explode if ignited.

HEALTH HAZARDS
Repeated exposure may cause skin dryness or cracking. Mildly irritating to skin. May be irritating to the eyes, nose, throat, and lungs. May cause central nervous system depression.

ENVIRONMENTAL HAZARDS
Expected to be toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

NFPA Hazard ID:	Health:	1	Flammability:	2	Reactivity:	0
HMIS Hazard ID:	Health:	1*	Flammability:	2	Reactivity:	0

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

This material is defined as a complex substance.

Hazardous Substance(s) or Complex Substance(s) required for disclosure

Name	CAS#		GHS Hazard Codes

		Concentration*	
STODDARD SOLVENT	8052-41-3	100 %	H226, H304, H336, H401, H411

Hazardous Constituent(s) Contained in Complex Substance(s) required for disclosure

Name	CAS#	Concentration*	GHS Hazard Codes
ETHYL BENZENE	100-41-4	0.1 - 0.5%	H225, H332, H373, H401, H412
NAPHTHALENE	91-20-3	0.1 - 0.5%	H302, H351, H400(M factor 1), H410(M factor 1)
NONANE	111-84-2	1 - 5%	H226, H304, H336, H315, H400(M factor 1), H410(M factor 1)
PSEUDOCUMENE (1,2,4-TRIMETHYLBENZENE)	95-63-6	1 - 5%	H226, H332, H335, H315, H319(2A), H401, H411
TOLUENE	108-88-3	0.1 - < 1%	H225, H304, H336, H361(D), H315, H373, H401, H412

* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume. Concentration values may vary.

As per paragraph (i) of 29 CFR 1910.1200, formulation is considered a trade secret and specific chemical identity and exact percentage (concentration) of composition may have been withheld. Specific chemical identity and exact percentage composition will be provided to health professionals, employees, or designated representatives in accordance with applicable provisions of paragraph (i).

SECTION 4 FIRST AID MEASURES

INHALATION

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT

Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION

Seek immediate medical attention. Do not induce vomiting.

NOTE TO PHYSICIAN

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Inappropriate Extinguishing Media: Straight Streams of Water

FIRE FIGHTING

Fire Fighting Instructions: Flammable. Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Unusual Fire Hazards: Vapors are flammable and heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger. Hazardous material. Firefighters should consider protective equipment indicated in Section 8.

Hazardous Combustion Products: Incomplete combustion products, Oxides of carbon, Smoke, Fume

FLAMMABILITY PROPERTIES

Flash Point [Method]: 45°C (113°F) [ASTM D-56]
Flammable Limits (Approximate volume % in air): LEL: 0.7 UEL: 6.0
Autoignition Temperature: 254°C (489°F) [ASTM E659]

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

PROTECTIVE MEASURES

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

For emergency responders: Respiratory protection: half-face or full-face respirator with filter(s) for organic vapor and, when applicable, H2S, or Self Contained Breathing Apparatus (SCBA) can be used depending on the size of spill and potential level of exposure. If the exposure cannot be completely characterized or an oxygen deficient atmosphere is possible or anticipated, SCBA is recommended. Work gloves that are resistant to aromatic hydrocarbons are recommended. Note: gloves made of polyvinyl acetate (PVA) are not water-resistant and are not suitable for emergency use. Chemical goggles are recommended if splashes or contact with eyes is possible. Small spills: normal antistatic work clothes are usually adequate. Large spills: full body suit of chemical resistant, antistatic material is recommended.

SPILL MANAGEMENT

Land Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do it without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. A vapor

suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Large Spills: Water spray may reduce vapor; but may not prevent ignition in closed spaces. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do it without risk. Eliminate sources of ignition. Warn other shipping. If the Flash Point exceeds the Ambient Temperature by 10 degrees C or more, use containment booms and remove from the surface by skimming or with suitable absorbents when conditions permit. If the Flash Point does not exceed the Ambient Air Temperature by at least 10C, use booms as a barrier to protect shorelines and allow material to evaporate. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7 HANDLING AND STORAGE

HANDLING

Avoid all personal contact. Potentially toxic/irritating fumes/vapors may be evolved from heated or agitated material. Use only with adequate ventilation. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).

Loading/Unloading Temperature: [Ambient]

Transport Temperature: [Ambient]
Transport Pressure: [Ambient]

Static Accumulator: This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

STORAGE

The type of container used to store the material may affect static accumulation and dissipation. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Storage containers should be grounded and bonded. Fixed storage containers, transfer containers and associated equipment should be grounded and bonded to prevent accumulation of static charge.
Storage Temperature: [Ambient]
Storage Pressure: [Ambient]

Suitable Containers/Packing: Drums; Tank Cars; Tank Trucks; Barges
Suitable Materials and Coatings (Chemical Compatibility): Carbon Steel; Stainless Steel; Polyester; Teflon; Polyethylene; Polypropylene
Unsuitable Materials and Coatings: Butyl Rubber; Polystyrene; Ethylene-proplyene-diene monomer (EPDM); Natural Rubber

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

Substance Name	Form	Limit / Standard			NOTE	Source
ETHYL BENZENE		TWA	435 mg/m3	100 ppm	N/A	OSHA Z1
ETHYL BENZENE		TWA	20 ppm		N/A	ACGIH
NAPHTHALENE		TWA	50 mg/m3	10 ppm	N/A	OSHA Z1
NAPHTHALENE		TWA	10 ppm		Skin	ACGIH
NONANE		TWA	200 ppm		N/A	ACGIH
PSEUDOCUMENE (1,2,4-TRIMETHYLBENZENE)		TWA	25 ppm		N/A	ACGIH
STODDARD SOLVENT		TWA	2900 mg/m3	500 ppm	N/A	OSHA Z1
STODDARD SOLVENT	Vapor.	TWA	66 ppm	400 mg/m3	Total Hydrocarbons	ExxonMobil
STODDARD SOLVENT		TWA	100 ppm		N/A	ACGIH
TOLUENE		Ceiling	300 ppm		N/A	OSHA Z2
TOLUENE		Maximum concentration	500 ppm		N/A	OSHA Z2
TOLUENE		TWA	200 ppm		N/A	OSHA Z2
TOLUENE		TWA	20 ppm		N/A	ACGIH

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

Biological limits

Substance	Specimen	Sampling Time	Limit	Determinant	Source
ETHYL BENZENE	Creatinine in urine	End of shift	0.15 g/g	Sum of mandelic acid and phenylglyoxylic acid	ACGIH BELs (BEIs)
NAPHTHALENE	No Biological Specimen provided	End of shift	Not Assigned	1-Naphthol, with hydrolysis + 2-Naphthol, with hydrolysis	ACGIH BELs (BEIs)
TOLUENE	Blood	Prior to last shift of work wk	0.02 mg/l	Toluene	ACGIH BELs (BEIs)
TOLUENE	Creatinine in urine	End of shift	0.3 mg/g	o-Cresol, with hydrolysis	ACGIH BELs (BEIs)
TOLUENE	Urine	End of shift	0.03 mg/l	Toluene	ACGIH BELs (BEIs)

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

Adequate ventilation should be provided so that exposure limits are not exceeded. Use explosion-proof ventilation equipment.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

Half-face filter respirator

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

Chemical resistant gloves are recommended.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

Chemical/oil resistant clothing is recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

GENERAL INFORMATION

Physical State: Liquid
Form: Clear
Color: Colorless
Odor: Pungent petroleum
Odor Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15.6 °C): 0.79 [With respect to water] [Calculated]
Density: 790 kg/m³ (6.59 lbs/gal, 0.79 kg/dm³) [ASTM D4052]
Flammability (Solid, Gas): N/A
Flash Point [Method]: 45°C (113°F) [ASTM D-56]
Flammable Limits (Approximate volume % in air): LEL: 0.7 UEL: 6.0
Autoignition Temperature: 254°C (489°F) [ASTM E659]
Boiling Point / Range: 159°C (318°F) - 202°C (396°F) [ASTM D86]
Decomposition Temperature: N/D
Vapor Density (Air = 1): 5 at 101 kPa [In-house method]
Vapor Pressure: 0.2 kPa (1.5 mm Hg) at 20 °C [Calculated]
Evaporation Rate (n-butyl acetate = 1): 0.2 [In-house method]
pH: N/A
Log Pow (n-Octanol/Water Partition Coefficient): > 4 [Estimated]
Solubility in Water: Negligible
Viscosity: 1 cSt (1 mm2/sec) at 40 °C | 1.3 cSt (1.3 mm2/sec) at 20°C [Calculated]
Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: N/D
Melting Point: N/A
Pour Point: < -51°C (-60°F) [ASTM D5950]
Molecular Weight: 144 G/MOLE [Calculated]
Coefficient of Thermal Expansion: 0.00074 per Deg C [Calculated]

SECTION 10 STABILITY AND REACTIVITY

REACTIVITY: See sub-sections below.

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Avoid heat, sparks, open flames and other ignition sources.

MATERIALS TO AVOID: Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

POSSIBILITY OF HAZARDOUS REACTIONS: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

Hazard Class	Conclusion / Remarks
Inhalation	
Acute Toxicity: (Rat) 4 hour(s) LC50 > 13.1 mg/l (Max attainable vapor conc.)	Minimally Toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 403
Irritation: No end point data for material.	Negligible hazard at ambient/normal handling temperatures.
Ingestion	
Acute Toxicity (Rat): LD50 > 15000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 401
Skin	
Acute Toxicity (Rabbit): LD50 > 3400 mg/kg	Minimally Toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 402
Skin Corrosion/Irritation: Data available.	Mildly irritating to skin with prolonged exposure. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 404
Eye	
Serious Eye Damage/Irritation: Data available.	May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 405
Sensitization	
Respiratory Sensitization: No end point data for material.	Not expected to be a respiratory sensitizer.
Skin Sensitization: Data available.	Not expected to be a skin sensitizer. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 406
Aspiration: Data available.	May be fatal if swallowed and enters airways. Based on physico-chemical properties of the material.
Germ Cell Mutagenicity: Data available.	Not expected to be a germ cell mutagen. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 471 473 474 475 479
Carcinogenicity: No end point data for material.	Contains a substance that may cause cancer. Based on assessment of the components.
Reproductive Toxicity: Data available.	Not expected to be a reproductive toxicant. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 413 414 415
Lactation: No end point data for material.	Not expected to cause harm to breast-fed children.
Specific Target Organ Toxicity (STOT)	
Single Exposure: No end point data for material.	May cause drowsiness or dizziness.
Repeated Exposure: Data available.	Not expected to cause organ damage from prolonged or repeated exposure. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 408 411 413

TOXICITY FOR SUBSTANCES

NAME	ACUTE TOXICITY
ETHYL BENZENE	Inhalation Lethality: 4 hour(s) LC50 17.8 mg/l (Vapor) (Rat); Oral Lethality: LD50 3.5 g/kg (Rat)
NAPHTHALENE	Inhalation Lethality: 4 hour(s) LC50 > 0.4 mg/l (Max attainable vapor conc.) (Rat); Oral Lethality: LD50 533 mg/kg (Mouse)

OTHER INFORMATION

For the product itself:

Vapor/aerosol concentrations above recommended exposure levels are irritating to the eyes and respiratory tract, may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects including death.

Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis.

Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

Contains:

NAPHTHALENE: Exposure to high concentrations of naphthalene may cause destruction of red blood cells, anemia, and cataracts. Naphthalene caused cancer in laboratory animal studies, but the relevance of these findings to humans is uncertain.

ETHYLBENZENE: Caused cancer in laboratory animal studies. The relevance of these findings to humans is uncertain.

The following ingredients are cited on the lists below:

Chemical Name	CAS Number	List Citations
ETHYL BENZENE	100-41-4	5
NAPHTHALENE	91-20-3	2, 5

--REGULATORY LISTS SEARCHED--

1 = NTP CARC
2 = NTP SUS
3 = IARC 1
4 = IARC 2A
5 = IARC 2B
6 = OSHA CARC

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material -- Expected to be toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

MOBILITY

Material -- Highly volatile, will partition rapidly to air. Not expected to partition to sediment and wastewater solids.

PERSISTENCE AND DEGRADABILITY

Biodegradation:

Material -- Expected to be inherently biodegradable

Hydrolysis:

Material -- Transformation due to hydrolysis not expected to be significant.

Photolysis:

Material -- Transformation due to photolysis not expected to be significant.

Atmospheric Oxidation:

Material -- Expected to degrade rapidly in air

OTHER ECOLOGICAL INFORMATION

VOC (EPA Method 24): 6.593 lbs/gal

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

REGULATORY DISPOSAL INFORMATION

RCRA Information: Disposal of unused product may be subject to RCRA regulations (40 CFR 261). Disposal of the used product may also be regulated due to ignitability, corrosivity, reactivity or toxicity as determined by the Toxicity Characteristic Leaching Procedure (TCLP). Potential RCRA characteristics: IGNITABILITY.

Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14 TRANSPORT INFORMATION

LAND (DOT)

Proper Shipping Name: PETROLEUM DISTILLATES, N.O.S. (1,2,4-Trimethylbenzene)
Hazard Class & Division: 3
ID Number: 1268
Packing Group: III
Marine Pollutant: Yes
ERG Number: 128
Label(s): 3
Transport Document Name: UN1268, PETROLEUM DISTILLATES, N.O.S. (1,2,4-Trimethylbenzene), 3, PG III, MARINE POLLUTANT

LAND (TDG)

Proper Shipping Name: PETROLEUM DISTILLATES, N.O.S.
Hazard Class & Division: 3
UN Number: 1268
Packing Group: III
Marine Pollutant: Yes

Footnote: Marine Pollutant designation is applicable only if shipped over water.

SEA (IMDG)

Proper Shipping Name: PETROLEUM DISTILLATES, N.O.S. (1,2,4-Trimethylbenzene)
Hazard Class & Division: 3
EMS Number: F-E, S-E
UN Number: 1268
Packing Group: III
Marine Pollutant: Yes
Label(s): 3
Transport Document Name: UN1268, PETROLEUM DISTILLATES, N.O.S. (1,2,4-Trimethylbenzene), 3, PG III, (45°C c.c.), MARINE POLLUTANT

AIR (IATA)

Proper Shipping Name: PETROLEUM DISTILLATES, N.O.S.
Hazard Class & Division: 3
UN Number: 1268
Packing Group: III
Label(s) / Mark(s): 3
Transport Document Name: UN1268, PETROLEUM DISTILLATES, N.O.S., 3, PG III

SECTION 15 REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: This material is considered hazardous in accordance with OSHA HazCom 2012, 29 CFR 1910.1200.

Listed or exempt from listing/notification on the following chemical inventories: AICS, DSL, IECSC, KECI, PICCS, TCSI, TSCA

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

CERCLA: This material is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Contact local authorities to determine if other reporting requirements apply.

CWA / OPA: This product is classified as an oil under Section 311 of the Clean Water Act (40 CFR 110) and the Oil Pollution Act of 1990. Discharge or spills which produce a visible sheen on either surface water, or in waterways/sewers which lead to surface water, must be reported to the National Response Center at 800-424-8802.

SARA (311/312) REPORTABLE GHS HAZARD CLASSES: Aspiration Hazard, Carcinogenicity, Flammable (gases, aerosols, liquids, or solids), Specific Target Organ toxicity (single or repeated exposure)

SARA (313) TOXIC RELEASE INVENTORY:

Chemical Name	CAS Number	Typical Value
ETHYL BENZENE	100-41-4	0.1 - 0.5%
NAPHTHALENE	91-20-3	0.1 - 0.5%
PSEUDOCUMENE (1,2,4-TRIMETHYLBENZENE)	95-63-6	1 - 5%

The following ingredients are cited on the lists below:

Chemical Name	CAS Number	List Citations
ETHYL BENZENE	100-41-4	1, 4, 10, 17, 19
NAPHTHALENE	91-20-3	1, 4, 10, 17, 19
NONANE	111-84-2	1, 5, 9, 13, 16, 17, 18
PSEUDOCUMENE (1,2,4-TRIMETHYLBENZENE)	95-63-6	1, 13, 16, 17, 18, 19
STODDARD SOLVENT	8052-41-3	1, 4, 13, 16, 17, 18
TOLUENE	108-88-3	15, 17, 19
XYLENES	1330-20-7	1, 4, 15, 19

--REGULATORY LISTS SEARCHED--

1 = ACGIH ALL	6 = TSCA 5a2	11 = CA P65 REPRO	16 = MN RTK
2 = ACGIH A1	7 = TSCA 5e	12 = CA RTK	17 = NJ RTK
3 = ACGIH A2	8 = TSCA 6	13 = IL RTK	18 = PA RTK
4 = OSHA Z	9 = TSCA 12b	14 = LA RTK	19 = RI RTK
5 = TSCA 4	10 = CA P65 CARC	15 = MI 293	

Code key: CARC=Carcinogen; REPRO=Reproductive

SECTION 16 OTHER INFORMATION

WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

This warning is given to comply with California Health and Safety Code 25249.6 and does not constitute an admission or a waiver of rights.

N/D = Not determined, N/A = Not applicable

KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):
H225: Highly flammable liquid and vapor; Flammable Liquid, Cat 2
H226: Flammable liquid and vapor; Flammable Liquid, Cat 3
H302: Harmful if swallowed; Acute Tox Oral, Cat 4
H304: May be fatal if swallowed and enters airways; Aspiration, Cat 1
H315: Causes skin irritation; Skin Corr/Irritation, Cat 2
H319(2A): Causes serious eye irritation; Serious Eye Damage/Irr, Cat 2A
H332: Harmful if inhaled; Acute Tox Inh, Cat 4
H335: May cause respiratory irritation; Target Organ Single, Resp Irr
H336: May cause drowsiness or dizziness; Target Organ Single, Narcotic
H351: Suspected of causing cancer; GHS Carcinogenicity, Cat 2
H361(D): Suspected of damaging the unborn child; Repro Tox, Cat 2 (Develop)
H373: May cause damage to organs through prolonged or repeated exposure; Target Organ, Repeated, Cat 2
H400: Very toxic to aquatic life; Acute Env Tox, Cat 1
H401: Toxic to aquatic life; Acute Env Tox, Cat 2
H410: Very toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 1
H411: Toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 2
H412: Harmful to aquatic life with long lasting effects; Chronic Env Tox, Cat 3

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:
Section 01: Company Mailing Address information was deleted.
Section 01: Company Mailing Address information was modified.
THIS MSDS COVERS THE FOLLOWING MATERIALS: BRFP VARSOL AT HYDRO STRIPPING SECTION

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Internal Use Only
MHC: 1A, 0, 0, 0, 2, 0

DGN: 4400178HUS (1009881)

Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 10/04/2012
Reviewed on 10/04/2012
Version 10

1 Identification of the substance/mixture and of the company/undertaking

Product identifier

Trade name: trowal T 77 2436

Registration number:
This product is a preparation.
Preparations are not registered in compliance with the REACH-regulation.
Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.

Application of the substance/the preparation: Compound for surface finishing.

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Walther Trowal GmbH & Co. KG
Rheinische Str. 35-37
D-42781 Haan
Germany
Phone: +49 (0) 212.957.10
Fax.: +49 (0) 212.957.1225
Email: info@walther-trowal.de
www.walther-trowal.de

Walther Trowal GmbH & Co. KG
Branch Office
4540 East Paris Ave., Suite F
Grand Rapids, MI 49512
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Phone: +1 616.455.8940
Fax.: +1 616.871.0037
Email: k.raby@walther-trowal.com
www.walther-trowal.com

Information department:
Walther Trowal GmbH & Co. KG
Branch office
Ken Raby

* 2 Hazards identification

Classification of the substance or mixture


GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC


Irritant
Irritating to eyes.
Information concerning particular hazards for human and environment:
The product has to be labelled due to the calculation procedure of international guidelines.

Label elements

Labelling according to EU guidelines:
The product has been classified and marked in accordance with directives on hazardous materials.

Code letter and hazard designation of product:

Irritant

Risk phrases:
Irritating to eyes.

Safety phrases:
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

NFPA ratings (scale 0 - 4)

Health = 1
Fire = 0
Reactivity = 0

HMIS ratings (scale 0 - 4)

Health = 1
Fire = 0
Reactivity = 0

Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixtures

Description: Mixture of the substances listed below with nonhazardous additions.

Dangerous components:		
68604-78-4	Fatty acids, C6-12, potassium salts Eye Irrit. 2A, H319	10-50%
26027-37-2	Poly(oxy-1,2-ethanediyl), .alpha.-[(9Z)-2-[(1-oxo-9-octadecenyl)amino]ethyl]-.omega.-hydroxy- Eye Irrit. 2A, H319	2-10%
85203-46-9	Fatty acids, C6-10, compounds with ethanolamine Skin Irrit. 2, H315; Eye Irrit. 2A, H319	≤2%
141-43-5	2-Aminoethanol Skin Corr. 1B, H314; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; H227	≤2%

4 First aid measures

Description of first aid measures

General information: Immediately remove any clothing soiled by the product.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Generally the product does not irritate the skin.

After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing:
Rinse out mouth and then drink plenty of water.
If symptoms persist consult doctor.

Information for doctor: The product consists partly of strongly foaming surfactants (detergents).
Most important symptoms and effects, both acute and delayed
No further relevant information available.
Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5 Firefighting measures

Extinguishing media

Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: not known
Special hazards arising from the substance or mixture
In case of fire, the following can be released:
Nitrogen oxides (NOx)
Carbon monoxide (CO)
Advice for firefighters

Protective equipment: Wear self-contained respiratory protective device.

Additional information:
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Particular danger of slipping on leaked/spilled product.
Environmental precautions:
Dilute with plenty of water.
Keep contaminated washing water and dispose of appropriately.
Do not allow to enter sewers/ surface or ground water.
Do not allow to penetrate the ground/soil.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

*
7 Handling and storage

Handling
Precautions for safe handling No special precautions are necessary if used correctly.

Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities
Storage

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: not required

Further information about storage conditions:
Keep receptacle tightly sealed.
Protect from heat and direct sunlight.

Recommended storage temperature: 5-35 °C
Minimum durability [years]: 2
Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.

Control parameters
Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls
Personal protective equipment:

General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Do not eat or drink while working.

Breathing equipment: not required

Protection of hands: not required

Eye protection:

Tightly sealed goggles

Body protection: Protective work clothing

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information	
Appearance:	
Form:	Fluid
Color:	Green
Odor:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not determined.
pH-value (10 g/l, 20 °C):	9,0-9,8
Change in condition	
Melting point/Melting range:	undetermined
Boiling point/Boiling range:	> 100°C (> 212 °F)
Setting temperature / range:	-2 °C
Flash point:	not applicable
Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure at 20°C (68 °F):	23 hPa (17 mm Hg)
Density at 20°C (68 °F):	1.03 g/cm³ (8.595 lbs/gal)
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	fully mixable

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.
VOC content:	0.4 %
Other information	No further relevant information available.

10 Stability and reactivity

Reactivity
Chemical stability

Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
Possibility of hazardous reactions No dangerous reactions known.
Conditions to avoid No further relevant information available.
Incompatible materials: No further relevant information available.
Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects

Acute toxicity

Primary irritant effect:
on the skin: no irritant effect
on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

Carcinogenic categories

IARC (International Agency for Research on Cancer)
None of the ingredients is listed.

NTP (National Toxicology Program)
None of the ingredients is listed.

12 Ecological information

Toxicity
Aquatic toxicity: No further relevant information available.
Persistence and degradability No further relevant information available.
Bioaccumulative potential No further relevant information available.
Mobility in soil No further relevant information available.

General notes:
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods

Recommendation:
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings

Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agent: Water

14 Transport information

UN-Number	
DOT, ADR, ADN, IMDG, IATA	void
UN proper shipping name	
DOT, ADR, ADN, IMDG, IATA	void
Transport hazard class(es)	
DOT, ADR, ADN, IMDG, IATA	
Class	void
Packing group	
DOT, ADR, IMDG, IATA	void
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	-

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Sara

Section 355 (extremely hazardous substances):
None of the ingredient is listed.

Section 313 (Specific toxic chemical listings):
None of the ingredients is listed.

TSCA (Toxic Substances Control Act):
All ingredients are listed.

Proposition 65

Chemicals known to cause cancer:
None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.

Chemicals known to cause developmental toxicity:
None of the ingredients is listed.

Cancerogenity categories

EPA (Environmental Protection Agency):
None of the ingredients is listed.

TLV (Threshold Limit Value established by ACGIH):
None of the ingredients is listed.

NIOSH-Ca (National Institute for Occupational Safety and Health):
None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration):
None of the ingredients is listed.

Hazard symbols:

Irritant

Risk phrases:
Irritating to eyes.

Safety phrases:
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

* 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing MSDS:
Walther Trowal GmbH & Co. KG
Laboratory department
Email: ehs@walther-trowal.com

Contact:
Dr. Lutz Rickerich, Dipl.-Ing. Angelika Helten, Philipp Schubert
(Languages: German, English)

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)

*** Data compared to the previous version altered.**

(US-EN)

SAFETY DATA SHEET

Print date: 01/29/2018 **Revision Date:** 01/29/2018 **Revision Number:** 1.02

1. IDENTIFICATION

Product identifier

Product Name: FERROCOTE® 5856 BF T1
Product code: 013315-05

Other means of identification

Synonyms No information available

Application

Recommended Use Corrosion Preventive
Uses advised against For industrial use only

Supplier/Manufacturer:

Supplier:
Quaker Chemical Corporation
Quaker Park One
901 Hector Street
Conshohocken, PA 19428
610-832-4000
E-mail: she@quakerchem.com

Emergency telephone number:
* 24 HOUR TRANSPORTATION:
**CHEMTREC: 1-800-424-9300
+703-527-3887 (Call collect outside of US)
* 24 HOUR EMERGENCY HEALTH & SAFETY:
**QUAKER CHEMICAL CORPORATION: (800) 523-7010
(Within US only) Outside of US call (703) 527-3887

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin Sensitization	Category 1
Aspiration toxicity	Category 1
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1
Flammable liquids	Category 4

Label Elements

Emergency Overview

DANGER

Hazard Statements
Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
Very toxic to aquatic life with long lasting effects
May be fatal if swallowed and enters airways
Combustible liquid

Appearance Clear, Amber **Physical State** Liquid **Odor** Pleasant

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Avoid release to the environment
Keep away from heat/sparks/open flames/hot surfaces. — No smoking

Precautionary Statements - Response
Specific treatment (see First Aid)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of water and soap Take off contaminated clothing and wash it before reuse If skin irritation or rash occurs: Get medical advice/attention
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician Do not induce vomiting
In case of fire: Use CO2, dry chemical, or foam for extinction
Collect spillage

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
None known

Other Information
None known.

Unknown acute toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
Severely hydrotreated light distillates	64742-47-8	60 - 70%
Calcium Salt	Proprietary	1 - 5%
Amine	Proprietary	1 - 5%
Scent, fruity	Proprietary	<1%

Physico-chemical properties: Combustible material

The exact percentage (concentration) of composition has been withheld as a trade secret. If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

General advice: Show this safety data sheet to the doctor in attendance. Remove contaminated clothing and shoes. Wash contaminated clothing before re-use. Wash off with soap and water. If symptoms persist, call a physician

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Skin contact: Remove contaminated clothing and shoes. Wash contaminated clothing before re-use. Wash off immediately with soap and plenty of water.

Ingestion: If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting: contains petroleum distillates and/or aromatic solvents. Risk of product entering the lungs on vomiting after ingestion. Never give anything by mouth to an unconscious person Do not induce vomiting without medical advice.

Inhalation: Move to fresh air in case of accidental inhalation of vapors. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Consult a physician.

Note to physician: This product contains petroleum distillates. Aspiration may cause pulmonary edema and pneumonitis.

Medical condition aggravated by exposure: Dermatitis and asthma.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Carbon dioxide (CO2) Dry chemical Foam

Specific hazards: Combustible material Do not allow material to contaminate ground water system.

Special protective equipment for fire-fighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

Specific methods: Water mist may be used to cool closed containers

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation. Do not breathe vapour/dust. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained.

Methods for cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Ground and bond containers when transferring material. Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Handling

Technical measures/precautions: Provide sufficient air exchange and/or exhaust in work rooms.

Safe handling advice: To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. In case of insufficient ventilation, wear suitable respiratory equipment. Do not breathe vapors or spray mist. Wear personal protective equipment. Avoid contact with skin and eyes. Wash thoroughly after handling. Keep container tightly closed.

Storage

Technical measures/storage conditions: Keep containers tightly closed in a cool, well-ventilated place.

Incompatible products: Strong oxidizing agents

Safe storage temperature: 40 - 100 ° F

Shelf life: 12 months

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	ACGIH Exposure Limits	OSHA TWA (final)	NIOSH - Pocket Guide
Mineral Oil	5 mg/m³	5mg/m³	5mg/m³
Calcium carbonate	None	None	10 mg/m³ (TWA) 5 mg/m³ (TWA)

Engineering measures: Provide adequate ventilation In case of insufficient ventilation, wear suitable respiratory equipment

Personal Protective Equipment:

General: Provide easy access to eyewash/safety shower facilities.

Respiratory protection: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, respiratory protection may be required. Contact your site safety representative for proper respirator selection.

Eye protection:	Wear safety glasses with side shields (or goggles)
Hand protection:	Wear chemical-resistant gloves as appropriate for the risk of exposure. Contact your safety department for specific recommendations
Skin and body protection:	Wear protective clothing and appropriate footwear necessary for the risk of exposure. Contact your health and safety department for specific recommendations
Hygiene measures:	Handle in accordance with sound chemical hygiene practices. Wear the appropriate PPE. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Do not eat, drink, or smoke while using chemicals.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Clear, Amber
Odor	Pleasant
Odor Threshold	No information available
pH concentrate:	No information available
pH Dilution	No information available
Melting/freezing point	No information available
Boiling Point/Range	> 148 °C / 300 °F
Flash Point	80 °C / 176 °F
Method	No information available
Evaporation rate	No information available
Flammability Limits in Air	
upper flammability limit	No information available
lower flammability limit	No information available
VOC Content Product (lb/gal)	No information available
VOC Content Product (g/L)	3.48 lb/gal (EPA Method 24)

Vapor pressure	No information available
Vapor density	No information available
Specific Gravity (g/cc, 15 C)	0.828
Bulk Density (lb/gal, 15 C)	6.91
Water Solubility	Insoluble in water
Solubility in other solvents	No information available
Partition coefficient: n-octanol/water	No information available
Autoignition temperature	No information available
Decomposition Temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available
Molecular Weight	No information available

10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage conditions.
Conditions to avoid:	Heat, flames and sparks.
Materials to avoid:	Strong oxidizing agents.
Hazardous decomposition products:	Carbon oxides. Sulphur oxides. Nitrogen oxides (nox).
Hazardous Polymerization:	No information available.

11. TOXICOLOGICAL INFORMATION

No toxicological information is available on the product. Data obtained on components are summarized below.

Information on likely routes of exposure

Inhalation	May cause irritation of respiratory tract.
Eye Contact	Irritating to eyes.
Skin Contact	Irritating to skin. May cause sensitization by skin contact.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Severely hydrotreated light distillates	> 5000 mg/kg (Rat) Oral LD50 Rat >5000 mg/kg (Source: IUCLID)	> 2000 mg/kg (Rabbit) Dermal LD50 Rabbit >2000 mg/kg (Source: NLM_CIP)	> 5.2 mg/L (Rat) 4 h Inhalation LC50 Rat >5.2 mg/L 4 h (Source: IUCLID)
Calcium Salt	> 5000 mg/kg (Rat) Oral LD50 Rat >5000 mg/kg (in oil, Source: CHEMVIEW)	> 20000 mg/kg (Rabbit) Dermal LD50 Rabbit >20000 mg/kg (in oil; no deaths occurred, Source: CHEMVIEW)	> 18 mg/L (Rat) 1 h Inhalation LC50 Rat >18 mg/L 1 h (in oil; no deaths occurred, aerosol, Source: CHEMVIEW)
Amine	-	-	-
Scent, fruity	-	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen

Chemical Name	IARC Carcinogens	NTP	OSHA - Select Carcinogens
Severely hydrotreated light distillates	Not listed	Not listed	Not listed
Calcium Salt	Not listed	Not listed	Not listed
Amine	Not listed	Not listed	Not listed
Scent, fruity	Not listed	Not listed	Not listed

Sensitization Product contains a component that is classified as a skin sensitizer. No studies have been conducted on the product itself.

Mutagenic effects: No information available.

Reproductive Toxicity No information available.

Developmental Toxicity No information available.

Teratogenic No information available.

Specific target organ systemic toxicity (single exposure) No information available.

Specific target organ systemic toxicity (repeated exposure) No information available.

Aspiration hazard May be fatal if swallowed and enters airways. Risk of serious damage to the lungs (by aspiration).

Additional information on toxicological effects

Reports of animal studies using both sexes of several species have shown that kidney effects can occur in male rats after prolonged and repeated inhalation exposures to light hydrocarbon vapors of the general type represented by this product. While the effects are of low order of severity in animals, the implications of these results have not yet been determined.

12. ECOLOGICAL INFORMATION

Chemical Name	Ecotoxicity - Fish Species Data:	Ecotoxicity - Freshwater Algae Data:	Ecotoxicity - Water Flea Data:
Severely hydrotreated light distillates	LC50 (Lepomis macrochirus - 96h) = 2.2 mg/L LC50 (Oncorhynchus mykiss - 96h) = 2.4 mg/L LC50 (Pimephales promelas - 96h) = 45 mg/L	No data	LC50 (Den-dronereides heteropoda - 96h) = 4720 mg/L
Calcium Salt	No data	No data	No data
Amine	No data	No data	No data
Scent, fruity	No data	No data	No data

0.3% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and Degradability No information available.

Bioaccumulation No information available.

Chemical Name	Octanol/water partition coefficient
Severely hydrotreated light distillates	-
Calcium Salt	-
Amine	-
Scent, fruity	-

Mobility: No data available

Ozone: No data available

13. DISPOSAL CONSIDERATIONS

Waste from residues/unused products: Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

Contaminated packaging: Do not re-use empty containers

Methods for cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust) Ground and bond containers when transferring material Sweep up and shovel into suitable containers for disposal

14. TRANSPORT INFORMATION

U. S. DEPARTMENT OF TRANSPORTATION:

UN/NA ID Number: NA1993

Proper shipping name: Combustible liquid n.o.s. (hydrotreated light petroleum distillates)

Hazard class:	Combustible
PG:	III
DOT ERG:	ERG 128

TDG (CANADA):

Proper shipping name:	Not regulated

IMDG/IMO:

UN nr:	UN3082
Proper shipping name:	Environmentally hazardous substance, liquid, n.o.s. (Hexadecylamine)
Class:	9
Packing group:	III
Limited quantity:	1 L

IATA/ICAO:

UN nr:	UN3082
Proper shipping name:	Environmentally hazardous substance, liquid, n.o.s. (Hexadecylamine)
Hazard Class:	9
Packing group:	III
Maximum quantity for cargo only:	450 L
Maximum quantity for passenger:	450 L
Limited quantity:	30 kg

15. REGULATORY INFORMATION

Federal Regulations

OSHA Hazard Communication Standard: This product is considered to be hazardous under the OSHA Hazard Communication Standard.

CERCLA/SARA Information:

SARA (311, 312) hazard class: See GHS Classification in Section 2 for hazard class information.

Chemical Name	Hazardous Substances and RQs	Extremely Hazardous Substances and TPQs	SARA 313 Emission Reporting
Severely hydrotreated light distillates	Not listed	Not listed	Not listed
Calcium Salt	Not listed	Not listed	Not listed
Amine	Not listed	Not listed	Not listed
Scent, fruity	Not listed	Not listed	Not listed

Clean Air and Clean Water Acts:

Chemical Name	Hazardous Air Pollutants	CWA - Hazardous Substances	CWA - Toxic Pollutants	CWA - Priority Pollutants
Severely hydrotreated light distillates	Not listed	Not listed	Not listed	Not listed

Calcium Salt	Not listed	Not listed	Not listed	Not listed
Amine	Not listed	Not listed	Not listed	Not listed
Scent, fruity	Not listed	Not listed	Not listed	Not listed

U.S. STATE REGULATIONS (RTK):

Chemical Name	California Proposition 65	PARTK	MI Critical Materials	NJRTK	MARTK
Severely hydrotreated light distillates	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Calcium Salt	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Amine	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Scent, fruity	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

California Proposition 65 Status: No components are listed

CANADIAN REGULATIONS:

Chemical Name	CEPA Schedule I	Challenge Substances
Severely hydrotreated light distillates	Not listed	Not listed
Calcium Salt	Not listed	Not listed
Amine	Not listed	Not listed
Scent, fruity	Not listed	Not listed

INVENTORY STATUS:

United States TSCA Inventory: This product complies with TSCA

Canada DSL/NDSL Inventory List This product complies with DSL

16. OTHER INFORMATION

Sources of key data used to compile the data sheet: Material safety data sheets of the ingredients.

Prepared by: Quaker Chemical Corporation -Safety, Health and Environmental Affairs Group - US

Revision Date: 01/29/2018
Reason for revision: This data sheet contains changes from the previous version in section(s) 14.

Personal protection recommendations should be reviewed by purchasers. Workplace conditions are important factors in specifying adequate protection.

Disclaimer
This product's safety information is provided to assist our customers in assessing compliance with safety/health/environmental regulations. The information contained herein is based on data available to us and is believed to be accurate. However, no warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of this data, the results to be obtained from the use thereof, or the hazards connected with the use of the product. Since the use of this product is within the exclusive control of the user, it is the user's obligation to determine the conditions for safe use of the product. Such conditions should comply with all regulations concerning the product. The company referenced in this Safety Data Sheet assumes no liability for any injury or damage, direct or consequential, resulting from the use of this product unless such injury or damage is attributable to the gross negligence of

such company.

End of Safety Data Sheet